

SILENT FALCON - Flying Wing Mini-UAS

- SILENT FALCON is durable with a reinforced fuselage construction
- Man portable for ease of mobility
- Requires no auxiliary equipment for launch or recovery operations
- The system is quiet to avoid detection and operates autonomously
- Providing persistent intelligence, surveillance, reconnaissance and targeting data (ISRT)
- It carries both an electro-optical (EO) and infrared(IR) camera plus illuminator on a lightweight mechanical gimbaled payload allowing the operator to keep eyes on target
- With a wingspan of 2.12 m and a weight of 3.5 Kg, the hand-launched SILENT FALCON provides aerial observation, day or night, at line-of-sight ranges up to 10 kilometers
- SILENT FALCON can be operated manually or programmed for autonomous operation, utilizing the system's advanced avionics and precise GPS navigation.

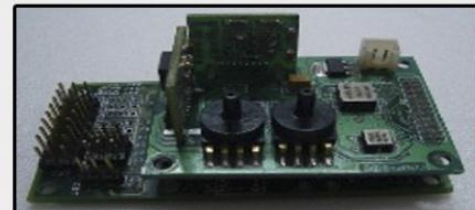


GROUND CONTROL STATION (GCS)

Displays flight parameters of UAV, Critical Signal indications, Video telemetry, Object Tracking, GIS for waypoint navigation

GCS can render wide variety of vector and raster file formats like DGN,DVD, geo TIFF, DTED,DEM, Google maps Autopilot commands control loop gains, Waypoints can be altered from the GCS on the fly.

The GCS software is a cross platform application, it is scalable and could be adapted or modified to meet specific requirements.



AUTOPILOT

The miniature autopilot weight less than 60 grams.



It has an on board accelerometers, rate gyros, GPS and pressure sensors for speed and altitude to provide stabilization, altitude reference, altitude and speed hold functions besides Autonomous waypoint navigation.

The autopilot has manual takeover switch on the RC transmitter that allows the ground safety pilot to take control of the UAV.

The autopilot code is validated using Matlab/Simulink and large code can be automatically generated using real time workshop.

This approach allows rapid development of autopilot algorithms for new platforms.



SPECIFICATIONS

Wing Span	: 2.12 m
Length	: 1 m
Range	: 5 km
Endurance	: 90 mins
Altitude	: 1500 m
Max Speed	: 75 knots
Takeoff Weight	: 3.6 kg
Motor	: 600 W
Propeller	: 13" x 8"

APPLICATION

- Army, Border Security, Police
- Law Enforcement
- Search and Rescue (SAR)
- Border and Maritime Patrol
- Surveillance and Reconnaissance
- Scientific Research
- Sports Events
- Monitoring & Survey
- Commercial Aerial Surveillance
- Oil, Gas and Mineral Exploration & Production
- Agro, Mining

PAYLOAD OPTIONS

- Electro Optic Camera with 4x Zoom
- Thermal optical sensor
- Three Axis Retractable Stabilized Gimbal with Electro Optic Camera Stabilization
- Multispectral Agriculture Imaging Payload

TARGET GROUPS

- Police
- Government & Military
- Research Institutes
- Universities
- Media
- Fire Fighters

MAJOR FEATURES

- Customized power management unit
- No acoustic signature beyond 100m altitude.
- Recording of video high resolution for post flight analysis.
- Simple, Compact, lightweight modular with rugged design
- Real time video and data transfer from onboard platform of the GCS
- System deployment, turn around and packing time of less than 5 minutes with one man operation.
- Fitment, removal and replacement of sensors are simple, quick and easily executable in all field conditions.

VIDEO DOWNLINK

- Analog Downlink
- Digital Downlink COFDM

TELEMETRY DATALINK

- FULL Duplex Digital Datalink

ANTENNA TRACKER

- Tripod stand.
- Optional interface to RC receiver.
- Windows XP,7,8 SDK to interface with user GCS.
- Interface with Ground Control Station through USB or RS 232.
- Wide range of DC input (8-40V) with reverse polarity protection, optional DC Input voltage indication.
- Heavy duty pan servo can rotate 0-360 degrees at 1.4 sec/60 degrees.
- Heavy duty tilt servo can rotate +/- 90 degrees at 1.0 sec/60 degrees.

